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Review of the OPNET IT GURU Software

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The OPNET IT GURU has been in existence for years and designed to be used for the industry and the academics. The simulation software is now in version 10.0 and equipped with abundant features such as: modeling network topology and traffic, application impact assessment, and server capacity planning.

The features of modeling network topology and traffic are ideal for network engineers to experiment different kinds of scenarios before implementation of any networks, which in turn could cost the organizations less on the IT budget. The application impact assessment is useful when measuring the end-to-end time of the deployed or to-be-deployed applications. The end-to-end response time is important to EC transactions. The server capacity planning can be used for IT departments to do what-if analysis before they reallocate IT resources such as production or application servers.

The OPNET IT GURU can be used as supplemental materials in any computer network courses in IS, MIS, or CS. Currently it is in companion with Peterson and Davie's (2003) textbook. It supports Windows NT/2000/XP and Solaris 7,8,9 (but not 2.6). Both standalone and server installations are supported but the license prices vary based on the number of computers installed. Since most readers of the JITIM are from the academics, the evaluation of the software focuses on the ease of use based on the criteria of user friendliness (Schneiderman, 1980; Nielsen, 1999; Johnson, 2002)) as summarized in Table 1.

Table 1: Evaluation of the Modeling Network Topology and Traffic of the OPNET IT GURU

| Functions | Advantages | Disadvantages |
|-----------------------|---|--|
| Network Creation | <ol style="list-style-type: none"> 1. capable of using pre-created networks in the library 2. capable of editing details 3. capable of creating subnets 4. fast to add or remove devices, e.g. switches 5. capable of labeling nodes | Labeling the nodes is tedious especially the network is large. Users can only label the nodes one by one. |
| Information Gathering | Providing choices of global or local statistics | It is not easy to find the detailed information in either global or local statistics. Not all functions are provided to the models in the library. Different versions provide different statistics functions. |
| Running Simulations | <ol style="list-style-type: none"> 1. capable of creating simulation logs 2. easy access | Appropriate statistics functions must be provided first to run the simulation. However, it is slow with big networks. In addition, users need to start over the simulation again if inappropriate statistics functions provided. |
| Look | <ol style="list-style-type: none"> 1. pure graphical with many windows 2. separate window for | It is lacking of intuitive icons on the screen and the hierarchical layout makes it hard to find |

| | | |
|-------------|---|---|
| | <ol style="list-style-type: none"> toolbar the look and feel is the same throughout the program; hence no learning curve to adapt to new functions | information embedded in deeper layers. |
| Scenarios | <ol style="list-style-type: none"> easy to duplicate capable of switching between scenarios capable of creating multiple scenarios in a single project capable of comparing results from multiple scenarios | The multiple scenarios can be confusing especially when comparing among many scenarios since presumably the scenarios in one project do not vary a lot. |
| Web Reports | <ol style="list-style-type: none"> well organized results are categorized clearly under each statistics | There is no option to add any more texts in it. There is no ability of customization when creating reports. |

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